

Name: \_\_\_\_\_

**at1124exam: Radicals and Squares (v824)**

**Question 1**

Simplify the radical expressions.

$$\sqrt{63}$$

$$\sqrt{99}$$

$$\sqrt{44}$$

**Question 2**

Find all solutions to the equation below:

$$\frac{(x + 6)^2 - 9}{8} = 9$$

**Question 3**

By completing the square, find both solutions to the given equation. *You must show work for full credit!*

$$x^2 + 6x = 40$$

**Question 4**

A quadratic polynomial function is shown below in standard form.

$$y = 4x^2 + 24x + 42$$

Express the function in **vertex form** and identify the **location** of the vertex.